REMARKS

Claims 1-12, 14-38 and 40-55 are pending in the above-identified application.

In the Office Action dated April 2, 2009, claims 1-12, 14-38 and 40-55 were rejected.

Accordingly, claims 1-12, 14-38 and 40-55 remain at issue.

I. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 1-12, 14-38 and 40-55 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nafeh* (US 5,343,251) in view of *Hooks et al.* (US 6,169,542) in view of *Dimitrova et al* (US 6,100,941). Applicants respectfully traverse this rejection.

With respect to independent claim 1 and referencing the exemplary embodiment depicted in Figure 1A for illustrative purposes, Applicants claim a signal processing device having the following limitations:

> *a commercial message section detecting means (202) for detecting a commercial message section (202a) from an input signal (200a) including at least the commercial message section and the remaining signal section on a time division basis* (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0010], [0046] and [0047]);
>
> *a commercial message extracting means (201) for extracting a commercial message (201a) in the commercial message section from the input signal in accordance with a result of the detection by the commercial message section detecting means (202)* (See, *Id*. at paras. [0010] and [0048]);
>
> *a recording means (205) for recording each signal extracted from the input signal by the commercial message extracting means (201)* (See, *Id*. at paras. [0010], [0048]-[0049] and [0082]-[0090]);
>
> *an index information extracting means (206) for extracting information from said commercial message section to be used as a user-selectable index(206a) representing said recorded commercial message, the information extracted from said commercial message section and associated with said commercial message being one of a starting image, a cut point image, a starting sound or an ending sound* (See, *Id*. at paras. [0010], [0048]-[0049] and [0082]-[0090])*; and*
>
> *a display means (208) for displaying said index* (See, *Id*. at paras. [0082]-[0092]).

Independent method claim 27 has similar limitations to those in claim 1.

The Examiner, in rejecting claim 1, continues to assert that *Nafeh* teaches "a commercial message section detecting means," "a commercial message extracting means," and "a recording means for recording" as taught by Applicants and recited in claim 1. (See, April 2, 2009 Office Action, November 25, 2008 Office Action, at pgs. 3-4, August 4, 2008 Advisory Action, at pg. 2). Applicants respectfully disagree with the Examiner's assertion.

In contrast to Applicants' claimed signal processing device as recited in claim 1, *Nafeh* discloses an apparatus 10 for discerning a commercial message from a program message in an input signal 12 based on learned signal patterns associated with different classes of commercial and program messages so that the commercial messages can be eliminated (or attenuated) before being recorded on a VCR or displayed on a TV. (See *Nafeh*, Col. 2:38 - Col. 3:57; Col. 5:29 - Col. 6:21; Col. 7:14-46). In particular, *Nafeh* discloses that "[t]he single output of the network [classifier 24 of apparatus 10] is used to make a decision as to whether the broadcast [or input signal 12] is either a commercial or a program, following a detected transition [in the broadcast or input signal 12]." (See *Nafeh*, Col. 6:18-21). Thus, *Nafeh* teaches detecting and eliminating commercial messages from an input signal before recording the input signal, Applicants submit that *Nafeh* effectively teaches away from a signal processing device having a commercial message extracting device for extracting a commercial message from a detected commercial message section of an input signal and a recording means for recording each commercial message extracted from an input signal (or program segment) so that the commercial messages may be selectively indexed as taught and claimed by Applicants.

The Examiner acknowledges that *Nafeh* fails to disclose (1) "a recording means for recording each signal extracted from the input signal by the commercial message extracting

means" or (2) "an index information extracting means for extracting information from said commercial message section to be used as a user-selectable index representing said recorded commercial message and display means for displaying said index." However, the Examiner asserts that *Hook* teaches the "recording means" and "index information extracting means for extracting information from said commercial message section to be used as a user-selectable index(206a) representing said recorded commercial message" limitations that are missing from the teachings of *Nafeh*.

Applicants respectfully disagree. *Hook* teaches "an interactive video distribution system (20)" that includes an "editing facility (28)" and a "head-end facility (54)" that encode and distribute "advertisements (40, 42)" in "an interactive video program (36)" to "subscriber units (22')." (See *Hook*, Abstract, Col. 2:35-64; Col. 3:33 - Col. 6:60; Figs. 1, 2 and 3). *Hook* further teaches the distributed "interactive video program (36)" with the encoded "advertisements (40, 42)" may be viewed on a "television screen (98)" of a "video subscriber unit (22')," where a "logo 108 identifies [the] advertisement 40 as an interactive advertisement" and "informs the subscriber of interactive subscriber unit 22' that [the] advertisement 40 can be registered in the one of [the] advertisement menus 92" stored by the "head-end facility (54)" for the subscriber. (See *Hook*, Col. 8:47-67). However, nowhere does *Hook* teach that the "head-end facility (54)" or the "subscriber unit (22') detects and extracts the advertisements 40 or 42 from the program (36) or subsequently stores and indexes the extracted advertisement 40 or 42.

The Examiner points to Figures 7 and 8 for support that *Hook* discloses "*a recording means for recording each signal extracted from the input signal by the commercial message extracting means*" and "*an index information extracting means for extracting information from*

said commercial message section to be used as a user-selectable index representing said recorded commercial message" as required by claim 1. (See, April 2, 2009 Office Action, at pg. 4).

Applicants respectfully disagree. With reference to Figures 7 and 8, *Hook* teaches that a subscriber may request "supplementary advertising information" by pressing a designated key on a subscriber interface 96 when the advertisement 40 or 41 is in view on the television screen 98 of the video subscriber unit 22'. In response to a subscriber's request to register an advertisement 40 or 41, *Hook* also teaches using a predefined advertisement identifier 120 corresponding to data encoded with the advertisement 40 or 41 as an entry 118 in the menu 92 associated with the respective subscriber. *Hook* further teaches that the subscriber may request to view the menu 92 of predefined advertisement identifiers registered by the subscriber so that the subscriber may select an entry 118 to request the "supplementary advertising information." (See *Hook*, Col. 8:61 - Col. 9:52; Col. 10:46 - Col. 11:52; Figs. 4, 6, 7, 8 & 9). However, Applicants submit that the use of a predefined advertisement identifier 120 as a selectable entry in a subscriber menu is not the same as or equivalent to "an index information extracting means for extracting information from [the] commercial message section to be used as a user-selectable index representing [the] recorded commercial message" as required in claim 1.

Moreover, Figure 7 of *Hook* simply discloses a process performed by the head-end facility 54 to provide a subscriber with selected "supplementary advertising information" as shown in Figure 9 of *Hook* based on the subscriber selecting one of the predefined advertisement identifiers 120 registered by the subscriber as previously noted.

In addition, Figure 6 of *Hook* does not suggest that the head-end facility 54 "records the extracted commercial message into the subscriber's data base … to allow for the user to properly choose a commercial that is desired for viewing" as asserted by the Examiner. Applicants submit that Figure 6 of *Hook* simply discloses the database of menus 92 stored by the head-end facility 54 for various subscribers, where (as previously noted) a menu 92 contains predefined advertisement identifiers 120 registered by the respective subscriber for the purpose of requesting supplemental advertising information. As previously noted, *Hook* does not disclose or fairly suggest that the predefined advertisement identifiers 120 are information extracted from a commercial message for use as an index.

The Examiner also acknowledges that *Nafeh* and *Hook* each fails to disclose "*an index information extracting means …"* where "*the information extracted from said commercial message section and associated with said commercial message* [is] *one of a starting image, a cut point image, a starting sound or an ending sound*." However, the Examiner asserts that *Dimitrova* teaches this limitation that is missing from the combine teachings of *Nafeh* and *Hook*.

Applicants respectfully disagree. *Dimitrova* discloses a commercial detection apparatus 56 having a processor 57 with a commercial detection thread 86. (See, *Dimitrova,* Abstract, Col. 4:53 - Col. 5:23; Figs. 1A, 1B and 2.) To detect a commercial in an input signal 52, *Dimitrova* discloses that the commercial detection thread 86, when processing a frame of the input signal 52, looks at "the average cut frame distance, cut rate, changes in the average cut frame distance, the absence of a logo, a commercial signature detection, brand name detection, a series of black frames preceding a high cut rate, similar frames located within a specified period of time before a frame being analyzed and character detection." (See, *Dimitrova,* Abstract, Col.

14:31-48; Col. 15:28-49). *Dimitrova* further teaches that the times in which the detected commercials are found in the input signal 52 are saved in memory 78 so that, when the signal is played back, the detected commercials "are either skipped or substituted with alternate content." (See, *Dimitrova,* Abstract, Col. 14:31-48; Col. 15:28-49; Col. 19:49-60). Thus, even though *Dimitrova* discloses various means for detecting a commercial within in input signal, Applicants submit that *Dimitrova* fails to teach or fairly suggest extracting information from a detected commercial for use as index for display and selection by a user for viewing. In particular, *Dimitrova* fails to teach or fairly suggest that "*the [index] information extracted from said commercial message section and associated with said commercial message* [is] *one of a starting image, a cut point image, a starting sound or an ending sound*" as required by claim 1.

Thus, for at least the foregoing reasons, Applicants submit that *Nafeh, Hook* and *Dimitrova* (alone or in combination) fail to teach or suggest all the limitations of independent claim 1. Accordingly, Applicants respectfully request that the rejection of claim be withdrawn.

Claims 27 and 55 each has limitations similar to claim 1. Thus, Applicants submit that claims 27 and 55 should also be deemed allowable for at least the same reasons as given for claim 1 above.

Claims 2-12, 14-26, and 53 depend directly or indirectly from claim 1 and should be deemed allowable for at least the same reasons as claim 1. Claims 28-38, 40-52, and 54 depend from claim 27 and should be deemed allowable for at least the same reasons as claim 27. Accordingly, Applicants respectfully request that the rejection to the dependent claims 2-12, 14-26, 28-38, and 40-54 be withdrawn.

II. Conclusion

In view of the above amendments and remarks, Applicant submits that all claims are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

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